Volunteer Lake Assessment Program Individual Lake Reports

TARLETON, LAKE, PIERMONT, NH

MORPHOMETRIC DATA

Watershed Area (Ac.):	4,807	**Max. Depth (m):**	20	**Flushing Rate (yr^{-1})**	1.1
Surface Area (Ac.):	315	**Mean Depth (m):**	8.5	**P Retention Coef:**	0.56
Shore Length (m):	6,000	**Volume (m^3):**	10,881,500	**Elevation (ft):**	1305

TROPHIC CLASSIFICATION

Year	Trophic class
1979	OLIGOTROPHIC
1991	OLIGOTROPHIC

KNOWN EXOTIC SPECIES

The Waterbody Report Card tables are generated from the 2012 305(b) report on the status of N.H. waters, and are based on data collected from 2001-2011.

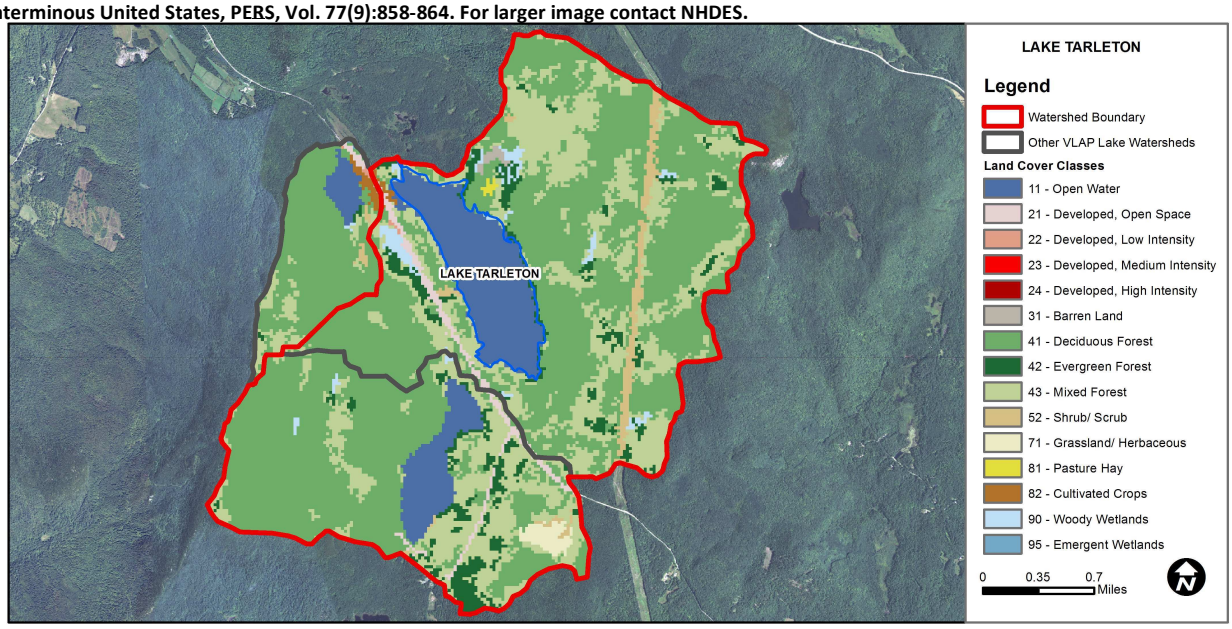
Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Good	>/=5 samples and median is < threshold but > 1/2 threshold value.
	pH	Slightly Bad	>10% of samples exceed criteria by a small margin (minimum of 2 exceedances).
	D.O. (mg/L)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	D.O. (% sat)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	Chlorophyll-a	Good	>/=5 samples and median is < threshold but > 1/2 threshold value.
Primary Contact Recreation	E. coli	Bad	>/=1 exceedance(s) of geometric mean criterion and/or >/=2 exceedances of single sample criterion, with 1 or more >2X criteria.
	Chlorophyll-a	Very Good	At least 10 samples with 0 exceedances of criteria.

BEACH PRIMARY CONTACT ASSESSMENT STATUS

LAKE TARLETON - LAKE TARLETON STATE PARK BEACH	E. coli	Cautionary	One exceedance of single sample criteria but not enough data to calcuate geometric mean. More data needed.
LAKE TARLETON - KINGSWOOD CAMP BEACH	E. coli	Cautionary	One exceedance of single sample criteria but not enough data to calcuate geometric mean. More data needed.

WATERSHED LAND USE SUMMARY

Fry, J., Xian, G., Jin, S., Dewitz, J., Homer, C., Yang, L., Barnes, C., Herold, N., and Wickham, J., 2011. Completion of the 2006 National Land Cover Database for the Conterminous United States, PERS, Vol. 77(9):858-864. For larger image contact NHDES.



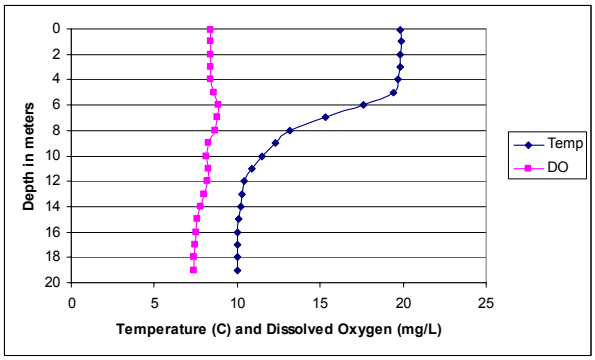
Land Cover Category	% Cover	Land Cover Category	% Cover	Land Cover Category	% Cover
Open Water	10.6	Barren Land	0.18	Grassland/Herbaceous	0.65
Developed-Open Space	1.48	Deciduous Forest	53.27	Pasture Hay	0.09
Developed-Low Intensity	0.03	Evergreen Forest	4.94	Cultivated Crops	0.13
Developed-Medium Intensity	0	Mixed Forest	25.35	Woody Wetlands	1.2
Developed-High Intensity	0	Shrub-Scrub	1.95	Emergent Wetlands	0

VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS
TARLETON LAKE, PIERMONT, NH
2012 DATA SUMMARY

OBSERVATIONS AND RECOMMENDATIONS (*Refer to Table 1 and Historical Deep Spot Data Graphic)*

- **CHLOROPHYLL-A:** Chlorophyll levels decreased greatly in August and average levels were less than the NH lake median. Historical trend analysis indicates a relatively stable chlorophyll level since monitoring began.
- **CONDUCTIVITY/CHLORIDE:** Conductivity levels were relatively low at all stations and less than the NH lake median.
- **E. COLI:** E. coli levels were well below state standards for public beaches and surface waters.
- **TOTAL PHOSPHORUS:** Phosphorus levels at all stations were very low. Historical trend analysis indicates a relatively stable epilimnetic (upper water layer) phosphorus level.
- **TRANSPARENCY:** Transparency improved from 2011 and was well above the NH lake median. Historical trend analysis indicates a relatively stable transparency since monitoring began.
- **TURBIDITY:** Turbidity levels were low at all stations.
- **pH:** pH levels tend to decrease to lower than desirable in the hypolimnion (lower water layer) due to natural causes.
- **RECOMMENDED ACTIONS:** Water quality improved slightly in 2012 likely due to the dry weather and decreased stormwater runoff. Keep up the great work!

Dissolved Oxygen & Temperature Profile



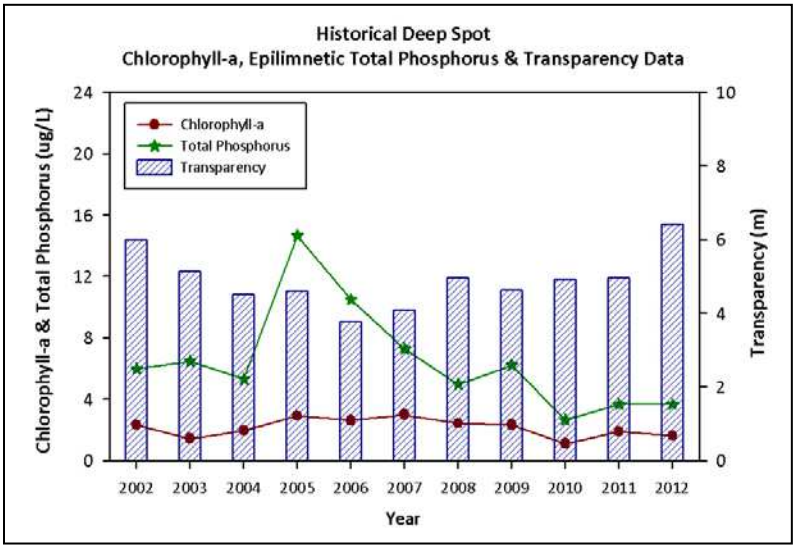
Station Name	Table 1. 2012 Average Water Quality Data for LAKE TARLETON								
	Alk.	Chlor-a	Cond.	E. Coli	Total P	Trans.		Turb.	pH
	mg/l	ug/l	uS/cm	#/100ml	ug/l	m		ntu	
						NVS	VS		
Deep Epilimnion	3.6	1.64	34.9		4	6.42	7.58	0.37	6.94
Deep Metalimnion			34.6		4			0.37	6.74
Deep Hypolimnion			35.9		5			0.28	6.16
Public Beach			37.7	2	6			0.62	7.00
Public Launch				2					
Rte 25c Inlet			32.7		5			0.36	6.71

NH Median Values: Median values for specific parameters generated from historic lake monitoring data.
Alkalinity: 4.9 mg/L
Chlorophyll-a: 4.58 mg/m^3
Conductivity: 40.0 uS/cm
Chloride: 4 mg/L
Total Phosphorus: 12 ug/L
Transparency: 3.2 m
pH: 6.6

NH Water Quality Standards: Numeric criteria for specific parameters. Results exceeding criteria are considered a water quality violation.
Chloride: < 230 mg/L (chronic)
E. coli: > 88 cts/100 mL – public beach
E. coli: > 406 cts/100 mL – surface waters
Turbidity: > 10 NTU above natural level
pH: 6.5-8.0 (unless naturally occurring)

HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Explanation
Chlorophyll-a	Stable	Data not significantly increasing or decreasing.
Transparency	Stable	Data not significantly increasing or decreasing.
Phosphorus (epilimnion)	Stable	Data not significantly increasing or decreasing.



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